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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JAMES M. POLK, PAUL E. JONES,
and SUBHASRI DHESIKAN

Appeal 2015-006226
Application 13/558,596
Technology Center 2400

Before JOHN A. JEFFERY, ERIC S. FRAHM, and
JOHN P. PINKERTON, *Administrative Patent Judges*.

JEFFERY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision to reject claims 1–11 and 13–23. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

STATEMENT OF THE CASE

Appellants' invention allocates bandwidth efficiently to ensure robust delivery of voice, video, and presentation data without wasting bandwidth. In one aspect, a message is obtained from an application associated with a variable bit-rate media flow, where the message includes (1) a minimum bandwidth at which the flow may operate, and (2) the amount by which the

flow's bandwidth can be trimmed. *See generally* Abstract; Spec. ¶¶ 1, 18.

Claim 1 is illustrative:

1. A method comprising:

obtaining a first message from an application, the application being associated with a variable bit-rate media flow, the first message including information, the information including at least an approximately minimum bandwidth at which the variable bit-rate media flow may operate and an increment by which a bandwidth of the variable bit-rate media flow may be trimmed;

determining an amount of available bandwidth in a network;

identifying, from the first message, the approximately minimum bandwidth at which the variable bit-rate media flow may operate and the increment by which the bandwidth of the variable bit-rate media flow may be trimmed; and

identifying a bandwidth allocation, the bandwidth allocation being identified based on the amount of available bandwidth in the network, the approximately minimum bandwidth at which the variable bit-rate media flow may operate, and the increment by which the bandwidth of the variable bit-rate media flow may be trimmed.

THE REJECTIONS

The Examiner rejected claims 1–5, 7–10, 13–17, and 19–22 under 35 U.S.C. § 103(a) as unpatentable over Songhurst (US 7,907,519 B2; Mar. 15, 2011) and Maciocco (US 2005/0039051 A1; Feb. 10, 2005). Ans. 2–9.¹

¹ Throughout this opinion, we refer to (1) the Appeal Brief filed February 2, 2015 (“App. Br.”), (2) the Examiner’s Answer mailed April 7, 2015 (“Ans.”), and (3) the Reply Brief filed June 5, 2015 (“Reply Br.”).

The Examiner rejected claims 6 and 18 under 35 U.S.C. § 103(a) as unpatentable over Songhurst, Maciocco, and Sen (US 7,532,613 B1; May 12, 2009). Ans. 9–10.

The Examiner rejected claim 11 under 35 U.S.C. § 103(a) as unpatentable over Songhurst, Maciocco, and Bims (US 2011/0039554 A1; Feb. 17, 2011). Ans. 10–11.

The Examiner rejected claim 23 under 35 U.S.C. § 103(a) as unpatentable over Leung (US 2012/0226816 A1; Sept. 6, 2012), Songhurst, and Oh (US 2004/0252714 A1; Dec. 16, 2004). Ans. 11–14.

THE REJECTION OVER SONGHURST AND MACIOCCO

The Examiner finds that Songhurst discloses many recited elements of claim 1, including a first message, namely a packet, with information including (1) an approximately minimum bandwidth at which variable bit-rate media flow may operate, and (2) an increment by which an associated bandwidth may be trimmed, namely via the token rate. Ans. 2–4, 14–17. Although the Examiner acknowledges that Songhurst does not obtain a first message from an application, nor determine an amount of available bandwidth in a network, the Examiner cites Maciocco for teaching these features in concluding that the claim would have been obvious. Ans. 4.

Appellants argue that Songhurst does not teach or suggest a message that includes both the recited minimum bandwidth and increment, let alone identify a bandwidth allocation based on that information and the amount of available bandwidth as claimed. App. Br. 14–17; Reply Br. 14–18.

ISSUE

Under § 103, has the Examiner erred in rejecting claim 1 by finding that Songhurst and Maciocco collectively would have taught or suggested a first message with information including (1) an approximately minimum bandwidth at which variable bit-rate media flow may operate, and (2) an increment by which an associated bandwidth may be trimmed?

ANALYSIS

Claims 1–5, 7–10, 13–17, and 19–21

We begin by noting that the Examiner’s reliance on the secondary reference to Maciocco is undisputed, as is the cited references’ combinability. Rather, as noted above, this dispute turns solely on the Examiner’s reliance on Songhurst for teaching the recited message, and identifying a bandwidth allocation based on information in that message. Therefore, we confine our discussion to Songhurst.

A key aspect of claim 1 is that the information in the first message has two components: (1) an approximately minimum bandwidth, and (2) an increment by which an associated bandwidth may be trimmed. The Examiner finds that this information is the class indication in Songhurst’s received packets, which are said to correspond to “messages,” and the data rate is increased or decreased by an increment of the token rate. Ans. 14–15.

We find this position problematic on this record. Songhurst’s packet forwarding system includes a packet classifier that (1) reads a class indication in received packets, and (2) passes packets to a class-based policer associated with the indicated class. Songhurst, Abstract. The class-based policer then assigns a provisional indication to packets of the

associated class responsive to measured load presented by the class's packets exceeding a threshold. *Id.* A multi-class policer then assigns a congestion indication to packets responsive to congestion at the forwarding apparatus. *Id.*

A key aspect of Songhurst's system is that it provides distinct minimum bandwidth guarantees for each class. Songhurst, col. 6, ll. 7–10. To this end, each class has an associated counter which filters packets of that class into a virtual queue. *Id.*, col. 6, ll. 11–13. For low-priority classes, the counter filters out packets of that class up to the rate $M(B)$, which is the rate by which the counter is incremented. *Id.*, col. 6, ll. 15–18. The counter is also decremented by the size of each new packet. *Id.*, col. 6, ll. 19–21. After offering a packet to the virtual queue, it may receive a congestion indication, and the counter is incremented at rate $M(B)$. *Id.*, col. 6, ll. 25–28.

Even if we assume, without deciding, that a received packet is a “message” as the Examiner contends (Ans. 15), these packet-based messages contain, at most, *only a class indicator*—not the two essential pieces of information recited in claim 1 on which bandwidth allocation is identified, namely (1) an approximately minimum bandwidth, and (2) an increment by an associated bandwidth may be trimmed. *Accord* Reply Br. 13 (noting this deficiency). That is, the *message itself* does not contain these two essential informational components that are used to identify a bandwidth allocation. To the extent that the Examiner takes the position that this information is later derived by Songhurst's system, and, therefore, it would have ostensibly been obvious to include this information in the message itself (*see* Ans. 14–15), the Examiner has not substantiated such a theory on this record, nor will we speculate in that regard here in the first instance on appeal. As

Appellants explain, including minimum bandwidth and increment information in the message itself, such as a Resource Reservation Protocol message, enables a network to change the bandwidth allocated to an application dynamically. App. Br. 11–12 (citing Spec. ¶¶ 22, 24).

Moreover, the main point of Songhurst is not to drop packets when there is an excess of packets in a particular class, but rather to forward them with an appropriate congestion indication. Songhurst, col. 5, ll. 14–24. Although Songhurst’s counter is incremented and decremented, and a minimum bandwidth is guaranteed for each class, Songhurst merely designates packets with or without congestion indications based on their class and placement in the virtual queue. *See* Songhurst, col. 5, ll. 14–24, col. 6, ll. 19–62.

Therefore, we agree with Appellants that Songhurst does not teach or suggest a first message with information including (1) an approximately minimum bandwidth at which variable bit-rate media flow may operate, and (2) an increment by which an associated bandwidth may be trimmed, let alone identify a bandwidth allocation based on that message-based information and the amount of available bandwidth as claimed. App. Br. 14–17; Reply Br. 14–18.

Accordingly, we are persuaded that the Examiner erred in rejecting (1) independent claim 1, (2) independent claim 13 which recites commensurate limitations, and (3) dependent claims 2–5, 7–10, 14–17, and 19–21 for similar reasons. Because this issue is dispositive regarding our reversing the Examiner’s rejection of these claims, we need not address Appellants’ other associated arguments.

Claim 22

We also do not sustain the Examiner's rejection of independent claim 22, which recites, in pertinent part, the first message including information that includes at least an approximately minimum bandwidth at which a construct associated with an application may operate. Unlike independent claims 1 and 13, the message of claim 22 does not include an increment, but rather includes only a minimum bandwidth. Although the increment of claim 22 is identified, only the minimum bandwidth is identified *from the message*.

Despite this distinction, we still find the Examiner's reliance on Songhurst problematic on this record. For the reasons explained previously, Songhurst's packet-based message does not include a minimum bandwidth at which a construct may operate, nor does Songhurst use that message-based information along with the identified increment and available bandwidth to identify a bandwidth allocation as claimed. Therefore, we are persuaded that the Examiner erred in rejecting independent claim 22.

THE REJECTION OVER LEUNG, SONGHURST, AND OH

We likewise do not sustain the Examiner's rejection of independent claim 23 over Leung, Songhurst, and Oh. Ans. 11–14. Claim 23 recites, in pertinent part, a message including information that includes (1) a minimum bandwidth, (2) a maximum bandwidth, and (3) an increment by which a bandwidth of variable bit-rate media flow may be augmented. As with the other rejections, the Examiner cites Songhurst for teaching the recited message including a minimum bandwidth and increment (Ans. 11–12, 23)—findings that are erroneous for the reasons previously discussed.

Therefore, regardless of whether Leung and Oh teach or suggest the particular elements of claim 23 for which they were cited, the Examiner has still not shown that the cited prior art teaches or suggests a message including a minimum bandwidth and increment as claimed.

We reach this conclusion despite claim 23 reciting various conditional limitations in the last two clauses that are performed *if* the available bandwidth amount is—or is not—equal to or more than the maximum bandwidth. Because these steps are contingent on meeting the recited conditions, one step would not occur to satisfy the claim. *See Ex parte Schulhauser*, No. 2013-007847 (PTAB Apr. 28, 2016) (precedential); *see also Cybersettle, Inc. v. Nat’l Arbitration Forum, Inc.*, 243 F. App’x 603, 607 (Fed. Cir. 2007) (unpublished) (“It is of course true that method steps may be contingent. If the condition for performing a contingent step is not satisfied, the performance recited by the step need not be carried out in order for the claimed method to be performed.”); *Applera Corp. v. Illumina, Inc.*, 375 F. App’x 12, 21 (Fed. Cir. 2010) (unpublished) (affirming a district court’s interpretation of a method claim as including a step that need not be practiced if the condition for practicing the step is not met).

As such, Appellants’ arguments regarding the cited prior art’s alleged failure to disclose the recited aspects of the conditional limitation in claim 23’s last clause (App. Br. 45–48; Reply Br. 47–50) are not commensurate with the scope of the claim, for the condition need not be satisfied to perform the recited method. Nevertheless, we still find that the Examiner erred by relying on Songhurst for teaching the recited message including a minimum bandwidth and increment (Ans. 11–12, 23) in connection with the

first recited step that *is* required by claim 23 for the reasons previously discussed.

Therefore, we are persuaded that the Examiner erred in rejecting claim 23.

THE OTHER OBVIOUSNESS REJECTIONS

Because the Examiner has not shown that the cited prior art cures the foregoing deficiencies regarding the rejection of independent claims 1 and 13, we will not sustain the obviousness rejections of dependent claims 6, 11, and 18 (Ans. 9–11) for similar reasons.

CONCLUSION

The Examiner erred in rejecting claims 1–11 and 13–23 under § 103.

DECISION

The Examiner's decision rejecting claims 1–11 and 13–23 is reversed.

REVERSED